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EXAMINER

NGUYEN, HANH N

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 08/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/964,640

Applicant(s)

HORNG ET AL.

Examiner

Nguyen N Hanh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/28/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Remarks

1. In view of amendments, the Examiner withdraws the objection to the specification, the addition of claims 13 and 14 has been acknowledged.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,2,4-6,13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Shiraki et al. (US Patent No. 4,891,537)

Regarding claim 1, Shiraki et al. disclose an easy-to-start structure for a D.C. brushless motor, comprising: a base (13 in Fig. 6) comprising a through-hole having an end, a support section (bearing 18 in Fig. 6) being provided in the end of the through-hole, plural windings (25-1 and 25-2 in Fig. 9) and an IC control means (39 in Fig. 6) being mounted to the base, at least one positioning member (34 in Fig. 6 and 9) being mounted to the base and located between said plural windings; and a rotor (29) comprising a shaft (19) and a permanent ring magnet (33) having a north pole and a south pole, each of the south pole and the north pole having a strong magnetic area, said positioning member being arranged to be aligned with whichever of the strong magnetic areas is closest to the positioning member when the rotor stops, and the shaft being rotatably held by the support section; said at least one positioning member being made of a material capable of attracting said whichever of the strong magnetic areas is closest and thus retaining one of the strong magnetic areas of the permanent ring

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magnet in a predetermined angular position proximal to said at least one positioning member when the rotor stops (abstract).

Regarding claim 2, Shiraki et al. disclose an easy-to-start structure for a D.C. brushless motor further comprising a support element (bearing 17) mounted to another end of the through-hole, the support element comprising a second support section (inner race of bearing 17) for rotatably holding an end of the shaft of the rotor.

Regarding claim 4, Shiraki et al. disclose an easy-to-start structure for a D.C. brushless motor wherein the IC control means (39 in Fig. 12) is located between two of said plural windings that are adjacent to each other.

Regarding claim 5, Shiraki et al. disclose an easy-to-start structure for a D.C. brushless motor wherein the rotor (29) has blades (30) mounted thereon.

Regarding claim 6, Shiraki et al. disclose an easy-to-start structure for a D.C. brushless motor wherein the base comprises at least one engaging hole (the recess to accommodate bearing 18), and wherein the support element comprises at least one engaging piece (outer race of bearing 4) for engaging with said at least one engaging hole.

Regarding claim 13, it is noted that all limitations of the claimed invention have been fulfilled by Shiraki et al. as in claim 1.

Regarding claim 14, Shiraki et al. disclose an easy-to-start structure for a D.C. brushless motor wherein the relatively strong magnetic area is radially aligned with said positioning member (Fig. 6)

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraki et al. in view of Nishiyama et al.

Regarding claim 3, Shiraki et al. show all limitations of the claimed invention except showing a brushless motor wherein the base has at least one positioning groove for receiving said at least one positioning member.

However, Nishiyama et al. disclose a rotor has at least one groove (13 in Fig. 2) for receiving magnet (12) for the purpose of holding the magnet.

Since Shiraki et al. and Nishiyama et al. are in the same field of endeavor, the purpose disclosed by Nishiyama et al. would have been recognized in the pertinent art of Shiraki et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Shiraki et al. by forming groove on the base as taught by Nishiyama et al. for the purpose of holding the magnet.

4. Claims 7, 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraki et al. in view of Kim.

Regarding claim 7, Shiraki et al. show an easy-to-start structure for a D.C. brushless motor, comprising: a base (13 in Fig. 6) comprising a through-hole having an end, a support section (bearing 18 in Fig. 6) being provided in the end of the

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through-hole, plural windings (25-1 and 25-2 in Fig. 9) and an IC control means (39 in Fig. 6) being mounted to the base; a rotor (29) comprising a shaft (19) and a permanent ring magnet (33) having a north pole and a south pole, each of the south pole and the north pole having a strong magnetic area, the shaft being rotatably held by the support section; and a casing (12) mounted around the base, at least one positioning member being located between said plural windings; said positioning member being arranged to be aligned with whichever of the strong magnetic areas is closest to the positioning member when the rotor stops; said at least one positioning member being made of a material capable of attracting and thus retaining said whichever of the strong magnetic areas is closest and thus retaining one of the strong magnetic areas of the permanent ring magnet in a predetermined angular position proximal to said at least one positioning member when the rotor stops except showing the casing comprising at least one positioning member provide thereon.

However, Kim discloses a brushless motor wherein the casing comprising at least one positioning member (39 in Fig. 1 and Col. 8, lines 5-15) provide thereon for the purpose of controlling the stoppage position of the rotor.

Since Shiraki et al. and Kim are in the same field of endeavor, the purpose disclosed by Kim would have been recognized in the pertinent art of Shiraki et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Shiraki et al. by using a position member provided on the casing as taught by Kim for the purpose of controlling the stoppage position of the rotor.

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Regarding claim 9, Kim also discloses a brushless motor wherein said at least one positioning member being directly formed on the casing by means of pressing.

Regarding claim 10, Shiraki et al. also disclose an easy-to-start structure for a D.C. brushless motor further comprising a support element (bearing 17) mounted to another end of the through-hole, the support element comprising a second support section (inner race of bearing 3) for rotatably holding an end of the shaft of the rotor.

Regarding claim 11, Shiraki et al. disclose an easy-to-start structure for a D.C. brushless motor wherein the IC control means (39) is located between two of said plural windings that are adjacent to each other.

Regarding claim 12, Shiraki et al. disclose an easy-to-start structure for a D.C. brushless motor wherein the base comprises at least one engaging hole (the recess to accommodate bearing 18), and wherein the support element comprises at least one engaging piece (outer race of bearing 18) for engaging with said at least one engaging hole.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraki et al. in view of Kim and further in view of Bruno.

Regarding claim 8, Shiraki et al. and Kim disclose the invention except for showing the base further comprises at least one rib on an outer wall thereof, and wherein the casing is tightly fitted to said at least one rib.

However, Bruno discloses a structure for an electric motor wherein base further comprises at least one rib on an outer wall thereof (Fig. 5), and wherein the casing is tightly fitted to said at least one rib for the purpose of supporting the base.

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Since Shiraki et al., Kim and Bruno are in the same field of endeavor, the purpose disclosed by Bruno would have been recognized in the pertinent art of Shiraki et al. and Kim.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Shiraki et al. by forming ribs on an outer wall as taught by Bruno for the purpose of supporting the base.

Response to Arguments

6. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Information on How to Contact USPTO

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is (703)305-3466. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703)308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3431 for regular communications and (703)305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-1782.

HNN

July 30, 2003

Thomas M. DeGherthy
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